



UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office
Address: COMMISSIONER FOR PATENTS
P.O. Box 1450
Alexandria, Virginia 22313-1450
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/699,791	11/04/2003	Cheol-Soo Jung	6192.0128.C3	4021

7590 12/27/2005

McGuireWo ds LLP
Suite 1800
1750 Tysons Boulevard
McLean, VA 22102

EXAMINER

ABRAHAM, FETSUM

ART UNIT	PAPER NUMBER
----------	--------------

2826

DATE MAILED: 12/27/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

10/699,791

Applicant(s)

JUNG ET AL.

Examiner

Fetsum Abraham

Art Unit

2826

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 30 September 2005.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 21-24 and 31 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) all is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
 - ☐ Certified copies of the priority documents have been received in Application No. _____.
 - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claims 21-24,31 are rejected under 35 U.S.C. 103(a) as being unpatentable over Kim (6,262,784).

Kim discloses apportion of an active matrix LCD display structure in the front page comprising a TFT usable in a display panel, the display having a first line (150), a second line (130) intersecting the first line, a pixel region defined by the intersection of the lines, a pixel electrode formed in the pixel region as always is in such pixels/arrays, and a blocking layer (9) connected to the second line (130a), the blocking line (9) in perpendicular relationship with two parallel gate or second lines (130a).

Clearly, gate lines conventionally lie across TFT switches of a row that define the word of a given display arrangement covering an area defined by the number of pixels representing a "WORD" in a given array. That means that the

gate lines (130a) extend through multiple pixels serving the scan line for the switches defined in the making of a “WORD”, usually more than three or four switches. Therefore, at least two blocking layers (9) across two parallel gate lines (130a) form a ladder shaped pattern in the array together with the gate lines (130a).

The prior art discloses all subject matter claimed but may not have formed said “conductive pattern” having a ladder shaped structure independent of the gate/second lines (130a). However, the pattern as broadly defined in the claim language could have been obviously interpreted by one of ordinary skill in the art to include a structure that includes the gate/second line because the pattern is claimed to be in contact with the gate line and together with the line, form a ladder like pattern at least within an area covered by two pixels.

As for the conductive nature of the blocking line (9), the specification says the following:

Brief Summary Text (21):

According to one embodiment of the present invention, a liquid crystal display device comprises a transparent substrate having a face thereon, and first and second display cells on the substrate. The first display cell contains a first pixel electrode and has a control input (e.g., gate electrode of a TFT) electrically coupled to a first gate line. The second display cell contains a second pixel electrode and a

control input electrically coupled to a second gate line. A first light blocking line is also provided on the substrate. The first light blocking line is preferably electrically coupled to the first gate line by patterning the first gate line and the first light blocking line using the same level of metallization. A first data line is also provided on the substrate. According to a preferred aspect of the present invention, the first data line overlaps the first and second pixel electrodes by not the first light blocking line. The first data line is also preferably formed at a higher level of metallization relative to the first light blocking line so that, among other things, parasitic capacitive coupling between the first data line and the first and second pixel electrodes can be maintained at a relatively low level.

As for claim 22, the patent discloses a storage wire/line (130b) in the structure and that structure is also part of the ladder shape lines.

As for claim 23, figure 9 shows a passivation layer (160) between the first line (150) and the second line (130a).

As for claim 24, a common electrode is a mandatory element in any pixel matrix since that is the reference element for any potential applied to any part of such matrices. In most cases, the electrode is positioned attached to the lower portion of the upper LCD substrate. Therefore, although the prior art may/could have been silent about “common electrode” or “common line”, the element is

inherent to all LCD devices without which such devices are rendered non-functional without voltage reference to all types of voltage applications in such structures.

As for claim 31, using the same material to make different conducting lines in a given structure is not a unique practice since it has been done for a long time in the art. Therefore, it would have been obvious to one skilled in the art to make the claimed lines from the same conducting material since the practice minimizes processing time steps and eliminates contamination thereby producing a better contamination free devices in shorter times and steps. Besides, The specification contains no disclosure of either the critical nature of the claimed arrangement or any unexpected results arising therefrom. Where patentability is said to be based upon particular chosen dimensions or upon another variable recited in a claim, the applicant must show that the chosen dimensions are critical. In re Woodruff, 919 F.2d 1575, 1578, 16 USPQ2d 1934, 1936 (Fed. Cir. 1990).

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Fetsum Abraham whose telephone number is: 571-272-1911. The examiner can normally be reached on 8:00 - 18:00.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Nathan J Flynn can be reached on 571-272-1915.

Fetsum Abraham//12/5/05

A handwritten signature in black ink, appearing to read 'Fetsum Abraham', is written over the typed name and date.